



# ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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## 35 Ill. Adm. Code 620; Groundwater Quality Pre-Filing Public Comment Period Factsheet and Overview of Proposed Changes

### Draft Proposed Rules

The Illinois EPA is proposing draft language to update 35 Ill. Adm. Code 620. The proposed updates include nine new chemicals, three new atrazine metabolites, and procedures for selecting toxicity values consistent with current federal guidance. Definitions are updated and references are consistent with those criteria and practices as incorporated. Site specific groundwater standards for designated Class III Special Resource Groundwater are also added. Exposure factors are updated, and the Human Non-Threshold Toxicant Advisory Concentration model is updated. Tables for similar-acting constituents are added. Finally, this proposal includes groundwater quality standards for five Per- and Polyfluoroalkyl Substances (PFAS): perfluorooctanoic acid (PFOA), perfluorooctanesulfonic acid (PFOS), perfluorononanoic acid (PFNA), perfluorohexanesulfonic acid (PFHxS), and perfluorobutanesulfonic acid (PFBS).

A summary of the key provisions is below. More information concerning the draft proposed rule may be found at

<https://www2.illinois.gov/epa/about-us/rules-regs/water/Pages/620-Groundwater-Quality.aspx>

### Public Comment

Prior to submitting proposed rules to the Illinois Pollution Control Board for review and final adoption, the Illinois EPA is entertaining public comment on draft proposed rules. The Illinois EPA will accept written public comment until **June 25, 2021**. Comments should be submitted to

[EPA.620.rulemaking@illinois.gov](mailto:EPA.620.rulemaking@illinois.gov)

All comments, including proposed alternative language, received by Illinois EPA will be considered prior to the Agency filing the proposed rule with Illinois Pollution Control Board. Questions about the process or rulemaking should be submitted to the e-mail address above.

### Public Meeting

The Illinois EPA will host a virtual public meeting to review the proposed changes and answer questions concerning the proposal. **The meeting will be held at 1:00 pm on May 26, 2021.**

The meeting link is:

<https://illinois.webex.com/illinois/j.php?MTID=m19e9dc943bb9f835453fc6b6e8823826>

Computer and telephone connection instructions are provided at the bottom of this Notice. If you have questions about connecting to the meeting, contact Jeff Guy at (217) 785-8724 or by submitting an e-mail to [EPA.620.rulemaking@illinois.gov](mailto:EPA.620.rulemaking@illinois.gov).

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## Key Provisions

1. Updates the methodology located in Appendix A for developing oral reference doses (RfDs), when a verified RfD is not available. The updated methodology is the method used by U.S. EPA Integrated Risk Information System (IRIS), the Tier 1 source for selecting toxicity criteria.
2. Provides the hierarchy for selecting a verified RfD from various sources. The hierarchy is in Appendix A.
3. Updates the Exposure Factors used in the Human Threshold Toxicant Advisory Concentration (HTTAC) equation and the Human Non-Threshold Toxicant Advisory Concentration (HNTAC) equations for both carcinogens and mutagens to be consistent with the U.S. EPA Exposure Factors Handbook (2011) and U.S. EPA Regional Screening Level calculator. Updates the exposure population from an average adult to a child ages 0-6 years for the HTTAC equation.
4. Updates Class I groundwater quality standards in tables at Part 620.410, based on updates to toxicity values, exposure factors and other methodologies.
5. Updates Class II groundwater quality standards in tables at Part 620.420, based on updates to Class I groundwater quality standards and updates to treatment factors, based on updates to dimensionless Henry's Law Constants when calculated at 20 °C and organic carbon partition coefficients.
6. Establishes groundwater quality standards for nine new chemicals, adds three metabolites as a mixture to atrazine, and moves atrazine and its metabolites tables to Part 620.410(c)(2) and Part 620.420(c)(2) for complex mixtures. Combines Radium 226 and 228 to form CASRN 7440-14-4: Radium (combined 226+228), updates the Class I groundwater quality standard for radium (combined 226+228) to an updated standard of 5 pCi/L, equal to the U.S. EPA Drinking Water MCL, and adds a Class II groundwater quality standard for radium (combined 226+228) at Part 620.420(a)(2). Establishes a Class II groundwater quality standard for silver and adds it to the table at Part 620.420(a)(2).
7. Updates constituent tables to include Chemical Abstract Services Registry Numbers (CASRNs) as additional identifiers for the constituents.
8. Adds footnotes to tables identifying the sources or methods for determining the groundwater quality standards.
9. Removes the explosive constituents at Parts 620.410(c) and 620.420(c); integrates the constituents into Parts 620.410(b) and 620.420(b).
10. Adds Appendix E, providing tables for similar-acting non-carcinogenic constituents by health effect (Table A) and similar-acting carcinogen constituents by cancer effect (Table B).
11. Updates the names of eleven constituents.
12. Adds carcinogen designations for four existing chemicals and one new chemical.
13. Adds mutagen designations for eleven chemicals.
14. Updates toxicity values for the constituents whose groundwater quality standards are based on the Human Threshold Toxicant Advisory Concentration (HTTAC) equation for noncarcinogens or the Human Nonthreshold Toxicant Advisory Concentration (HNTAC) equation for carcinogens.

**A detailed list of Key Provisions can be found at**  
**<https://www2.illinois.gov/epa/about-us/rules-regs/water/Pages/620-Groundwater-Quality.aspx>**

## Proposed Changes to 620 Sub Part A-C

Sub Part	Section	Proposed Changes
<b>Part A</b>	<b>620.110</b>	Adds definition of “Chemical Abstract Service Registry Numbers (CASRN)”, “Lowest Concentration Minimum Reporting Level”, and “Mutagen”. Updates definition of “Carcinogen” to be consistent with updates to terminology used by U.S. EPA Integrated Risk Information System, and definition of “Detection” to language currently used in test methods. Removes the definition of “Practical Quantitation Level”.
	<b>620.125</b>	Updates CFR references to most recent iteration of the code. Adds Illinois EPA “Integrated Water Quality Report and Section 303(d) List” and National Academy of Science “Water Quality Criteria” (1973) to incorporated references and updates several test methods. Adds references from the U.S. EPA Office of Research and Development, National Center for Environmental Assessment, and reference from U.S. EPA Office of Resource Conservation and Recovery. Updated for groundwater guidance from USEPA 2017.
<b>Part B</b>	<b>620.210</b>	Removes permeameter as an acceptable means to determine hydraulic conductivity. Adds the wellhead protection area of a community water supply well or well field as a specific area to which Class I groundwater quality standards are applicable.
	<b>620.250</b>	Lists a standard set of documentation that must be included with all groundwater management zone applications.
<b>Part C</b>	<b>620.302</b>	Adds to the list of examples of persons who do groundwater monitoring.
	<b>620.310</b>	Updates table at Part 620.310(a)(3)(A)(i) to include CASRN for each constituent; and removes para-dichlorobenzene and ethylbenzene from the table due to their updated carcinogen classification and the Board Note for 620.310(a)(3)(A). Adds a table at Part 620.310(a)(3)(A)(ii) depicting the constituents in the subsection; and removes <i>gamma</i> -HCH ( <i>gamma</i> -hexachlorocyclohexane, lindane) and isopropylbenzene (cumene) due to their updated carcinogen classification and the Board Note for 620.310(a)(3)(A). Amends Board Note for 620.310(a)(3)(A) to revised outdated language.

## Proposed Changes to 620 Sub Part D-F

Sub Part	Section	Proposed Changes
<b>Part D</b>	<b>620.410</b>	Adds Class I groundwater quality standards for nine new chemicals. Updates constituent tables to add CASRN for each constituent. Adds footnotes detailing the sources of the standards. Updates Class I groundwater quality standards as applicable. Removes explosive constituents table at 620.410(c) and integrates the constituents into table at 620.410(b). Moves atrazine from 620.410(b) to the complex chemical mixtures tables at 620.410(c) with the addition of atrazine metabolites.
	<b>620.420</b>	Adds Class II groundwater quality standards for nine new chemicals and two chemicals listed in 620.410 without prior Class II groundwater quality standards. Updates constituent tables to add a CASRN for each constituent, and update Class II groundwater quality standards as applicable. Adds footnotes detailing the sources of the standards. Removes explosive constituents table at 620.420(c) and integrates the constituents into table at 620.420(b). Moves atrazine from 620.420(b) to the complex chemical mixtures tables at 620.420(c) with the addition of atrazine metabolites.
	<b>620.430</b>	Establishes site specific Class III groundwater quality standards for chloride and pH at four dedicated nature preserves, which are caves, pursuant to 620.230(b). Establishes site specific Class III groundwater quality standards for chloride at two dedicated nature preserves, which are wetlands, pursuant to 620.230(b).
	<b>620.440</b>	Updates names of explosive constituents.
	<b>620.450</b>	Updates names of explosive constituents.
<b>Part E</b>	<b>620.510</b>	Requires that the 2009 Unified Guidance be used to determine background groundwater quality unless other methods are specified by regulation. Replaces the use of the PQL with the LLOQ, LCMRL or MDL, as appropriate to the nature of the chemical.
<b>Part F</b>	<b>620.601</b>	(b)-Updates code reference to 604.200.
	<b>620.605</b>	(b)(1) Designates the more stringent toxicity value of the (Human Threshold Toxicant Advisory Concentration (HTTAC) or Human Nonthreshold Toxicant Advisory Concentration (HNTAC) as the guidance value in the absence of a Maximum Contaminant Level (MCL) or Maximum Contaminant Level Goal (MCLG).
		(b)(2) Removes the Human Nonthreshold Toxicant Advisory Concentration (HNTAC) language and equation and relocates it to Appendix A.

## Proposed Changes to 620 Appendices

Appendix	Section	Proposed Changes
A	(a)	Updates exposure factors representative of a child for the HTTAC model, which is consistent with Illinois Administrative Code Part 742 and U.S. EPA Regional Screening Levels (per capita daily water consumption = 0.78 liters per day, assumed average weight of a child 0-6 years of age = 15 kg).
	(b)(2)	Incorporates U.S. EPA's hierarchy of toxicity sources from " <i>Tier 3 Toxicity Value White Paper</i> ", dated May 16, 2013, by U.S. EPA Office of Solid Waste and Emergency Response Human Health Regional Risk Assessors Forum (OSWER) for determining an appropriate verified oral reference dose.
	(b)(3)	Revises methodology used to calculate guidance values when a verified oral reference dose is not available to make language consistent with U.S. EPA Reference Dose Guidance.
	(b)(4)	Clarifies usage of uncertainty factors.
	(c)(1)	Adds equation for calculating HNTAC guidance level for chemicals designated as mutagens.
	(c)(2)	Updates equation for calculating HNTAC guidance levels for chemicals designated as carcinogens that are not designated as mutagens.
B	(c)	Removes language specific to mixtures of ortho-dichlorobenzene and para-dichlorobenzene, and 1,1-dichloroethane and 1,1,1-trichloroethane, and adds reference to Appendix E.
E		Provides tables of similar acting non-carcinogenic and carcinogenic constituents.